

## CLAIMS:

### 1.

1                   A reinforcing structure of a fuel tank having a first and an opposing  
2 second wall defining a fuel chamber, the reinforcing structure comprising:

3                   a first indentation carried unitarily by the first wall and extending into the  
4 fuel chamber, the first indentation having a bottom portion engaged to the opposing  
5 second wall; and

6                   a stress relief feature disposed within the chamber, the stress relief feature  
7 having an engagement area being annular in shape and thus formed by the engagement of  
8 the bottom portion to the opposing second wall.

### 2.

1                   The reinforcing structure set forth in claim 1 comprising a second  
2 indentation carried unitarily by the second wall, the second indentation having a bottom  
3 portion wherein the stress relief feature is formed between the bottom portions of the  
4 first and second indentations.

### 3.

1                   The reinforcing structure set forth in claim 2, wherein the bottom portions of the  
2 first and second indentations enclosed by the annular engagement area form a void.

**4.**

1           The reinforcing structure set forth in claim 3, wherein the stress relief  
2   feature has a radial opening communicating between the void and the chamber and for  
3   providing a starting point for a bursting tear through the annular engagement area when a  
4   predetermined internal or external pressure is exceeded.

**5.**

1           The reinforcing structure set forth in claim 4 wherein the circumferential  
2   orientation of the opening is dependent upon the direction of adverse forces exerted upon  
3   the tank.

**6.**

1           The reinforcing structure set forth in claim 3, wherein the bottom portions  
2   of the first and second indentations have a substantially constant wall thickness, and  
3   wherein the engagement area is seventy-five percent or less than the cross section area of  
4   either adjacent indentation.

**7.**

1           The reinforcing structure set forth in claim 6, wherein the fuel tank is a  
2   multi-layered structure of plastic material and is formed by a blow mold process.

**8.**

1           A fuel tank comprising:  
2           a first wall;  
3           a second wall opposed to the first wall;  
4           a chamber defined between the first and second walls; and  
5           a reinforcing structure having a first indentation projecting into the  
6           chamber from the first wall, a second indentation projecting into the chamber from the  
7           second wall, a stress relief feature disposed within the chamber, and wherein a bottom  
8           portion of the first indentation is engaged to a bottom portion of the second indentation.

**9.**

1           The fuel tank set forth in claim 8 wherein the first and second indentations  
2           are unitary to the respective first and second walls.

**10.**

1           The fuel tank set forth in claim 9 wherein the stress relief feature is  
2           disposed between the bottom portions of the first and second indentations and wherein  
3           the bottom portions are engaged directly by an engagement area of the stress relief  
4           feature.

**11.**

1           The fuel tank set forth in claim 10 wherein the engagement area is welded  
2           and annular in shape, and wherein the bottom portions disposed radially inward from the  
3           engagement area form a substantial spherical void.

**12.**

1                   The fuel tank set forth in claim 11 wherein the stress relief feature has a  
2   radial opening communicating between the chamber and the void.

**13.**

1                   The fuel tank set forth in claim 12 wherein the radial opening and the  
2   engagement area are disposed along an imaginary plane.

**14.**

1                   The fuel tank set forth in claim 9 wherein the stress relief feature has an  
2   elongated stress relief bar disposed within the chamber and engaged between the first  
3   and second indentations at opposing ends.

**15.**

1                   The fuel tank set forth in claim 14 wherein the stress relief feature has a  
2   groove carried transversely by the bar and for providing a starting point for a bursting  
3   tear through the bar when a predetermined internal or external pressure is exceeded.

**16.**

1                   The fuel tank set forth in claim 15 wherein the stress relief bar is made of  
2   plastic.

**17.**

1 A fuel tank comprising:  
2 a first wall;  
3 a second wall opposed to the first wall;  
4 a first indentation projecting into the chamber from the first wall;  
5 a second indentation projecting into the chamber from the second wall;  
6 a hollow protrusion projecting acutely via a juncture into the chamber  
7 from a distal end portion of the second indentation; and  
8 wherein the hollow protrusion engages the first indentation at a distal end.

**18.**

1 The fuel tank set forth in claim 17 comprising:  
2 the second wall having an interior surface exposed to the chamber and an  
3 exterior surface;  
4 a plug engaged sealably to the exterior surface of the second wall at the  
5 second indentation; and  
6 a secondary chamber defined by the second indentation and carried  
7 between the exterior surface of the second wall and the plug.

**19.**

1 The fuel tank set forth in claim 18 wherein the smallest wall thickness  
2 defined between the interior and exterior surfaces of the second wall is located at the  
3 juncture of the second indentation, and wherein the cross section area of the second  
4 indentation at the juncture is smaller than the area of the distal end of the protrusion.

## 20.

- 1 The fuel tanks set forth in claim 19 wherein the distal end is square in
- 2 shape.